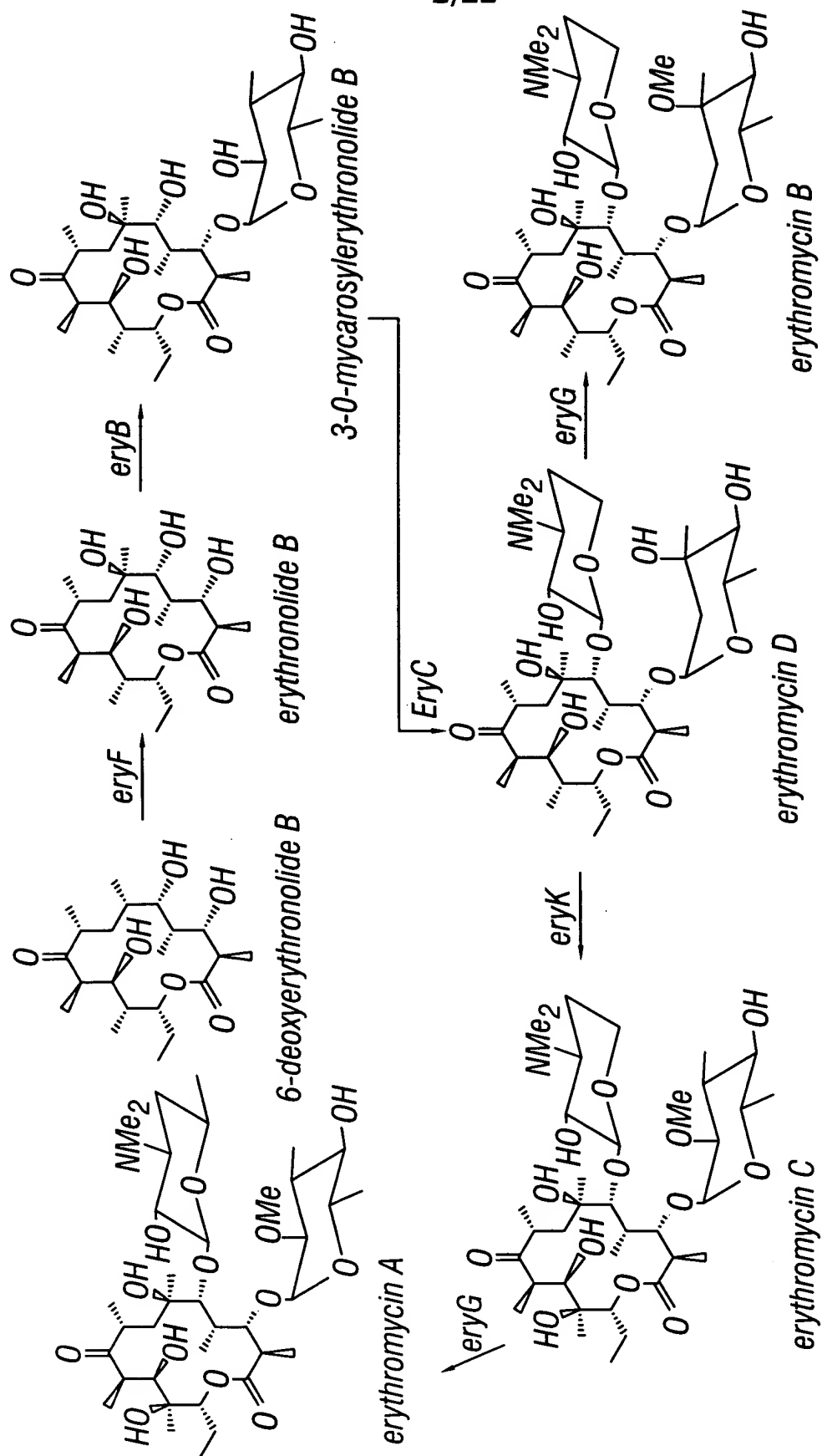


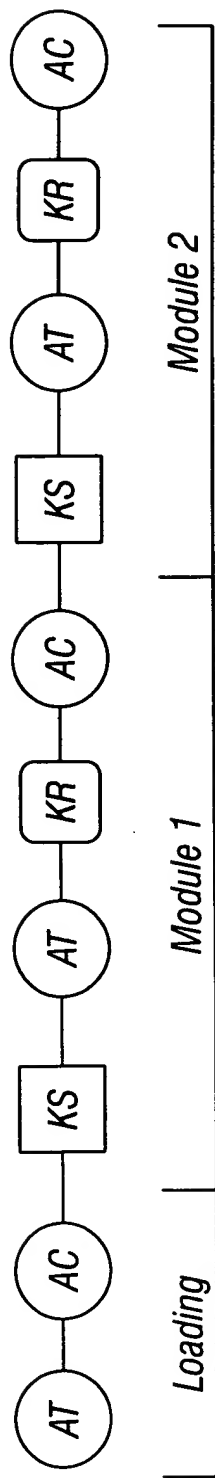
**FIG. 1A**

**FIG. 1B**



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DEBSI:



Generic Modular PKS

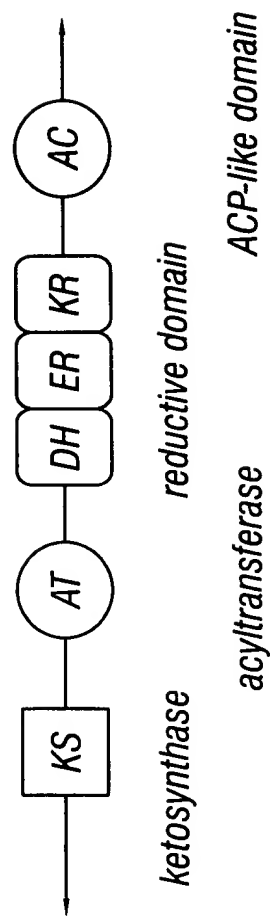


FIG. 2

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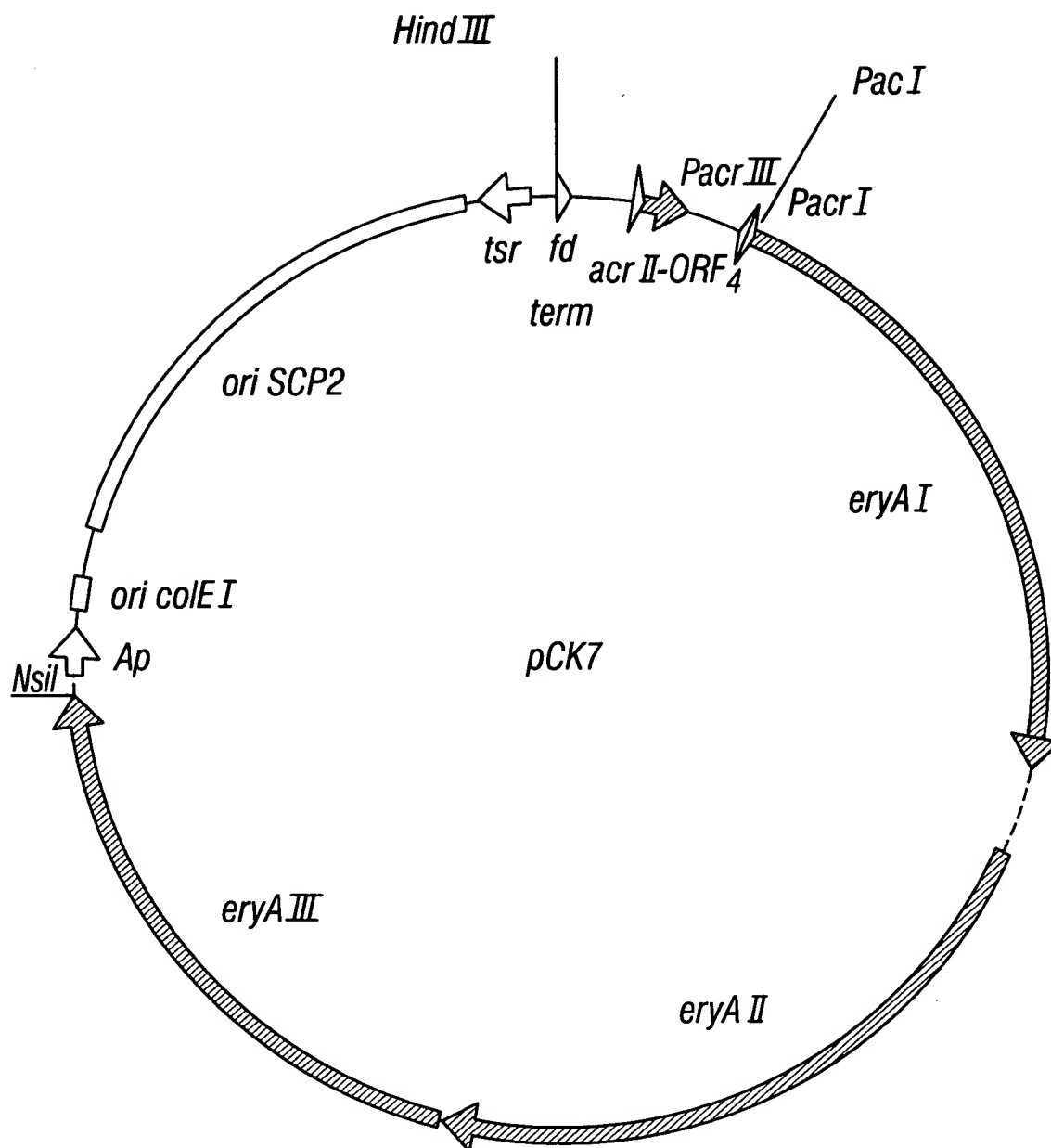
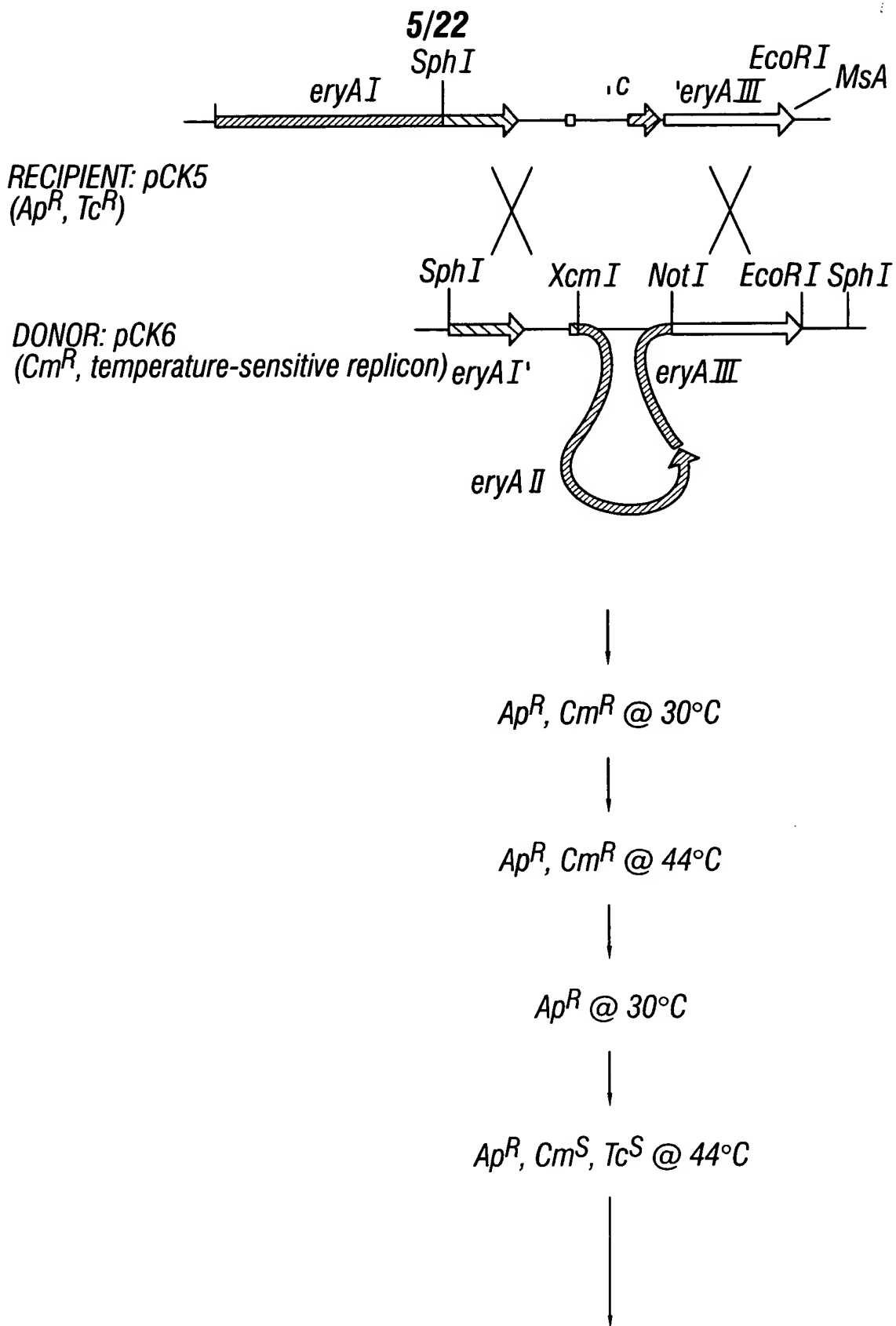


FIG. 3



**FIG. 4**

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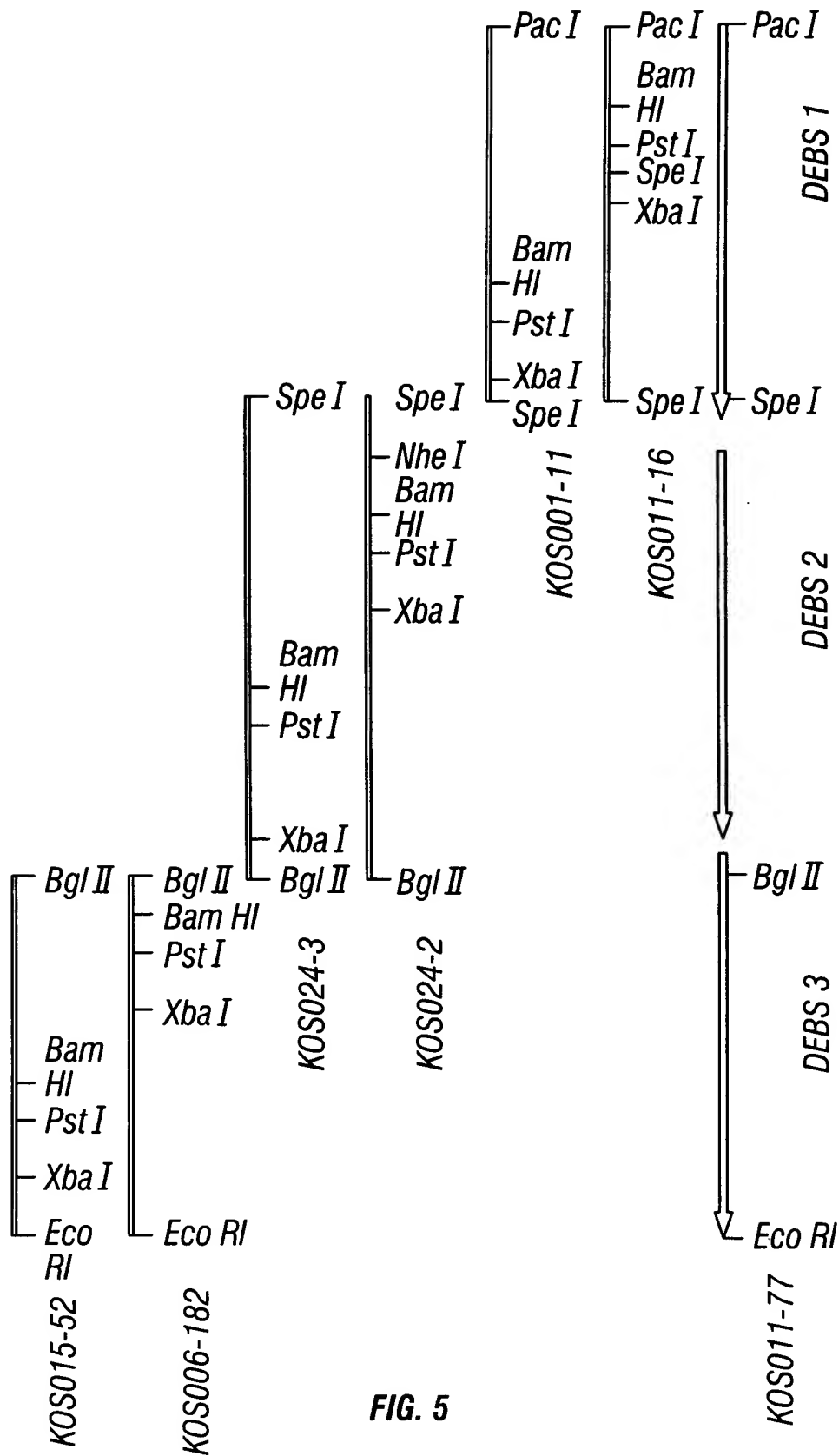


FIG. 5

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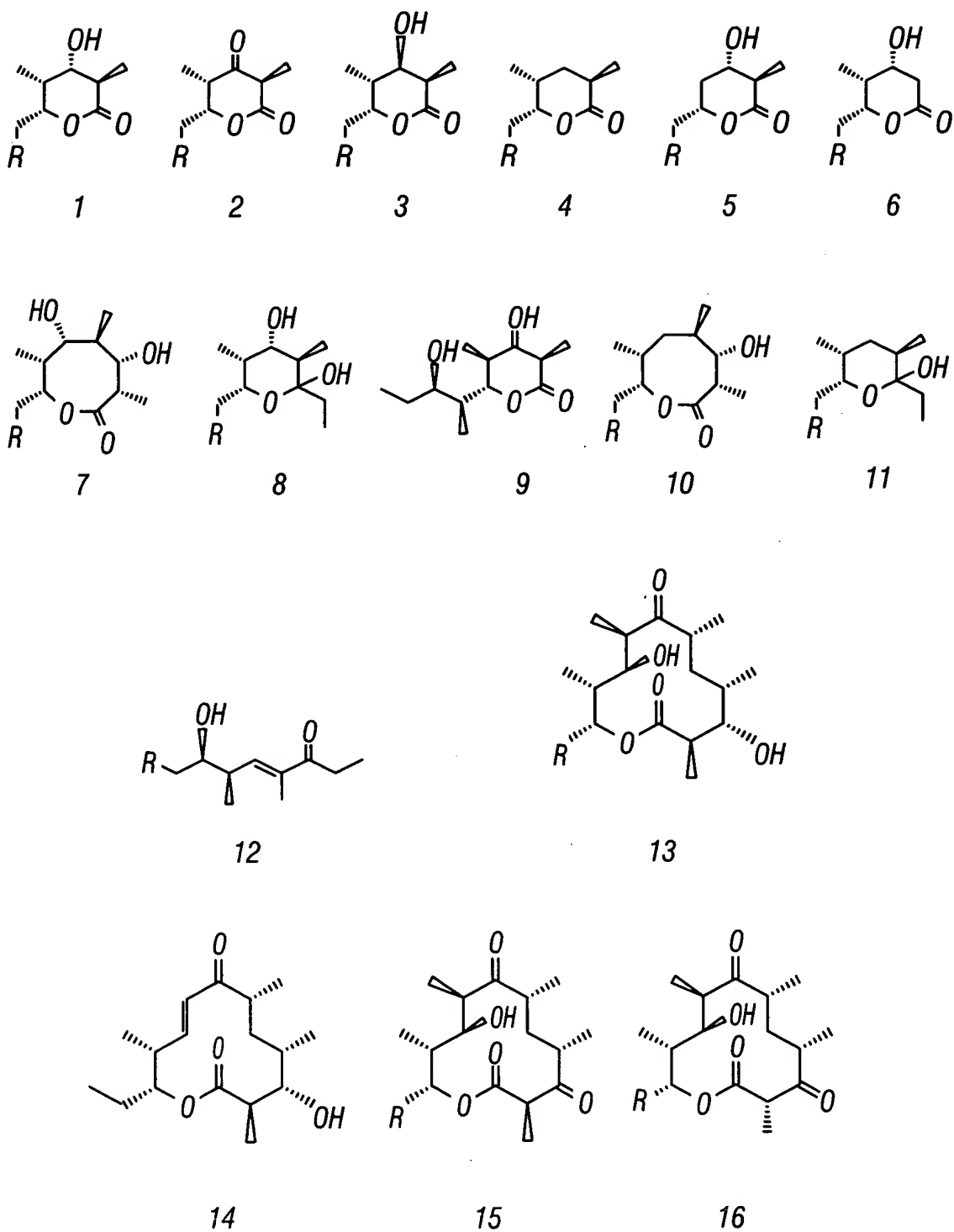


FIG. 6A

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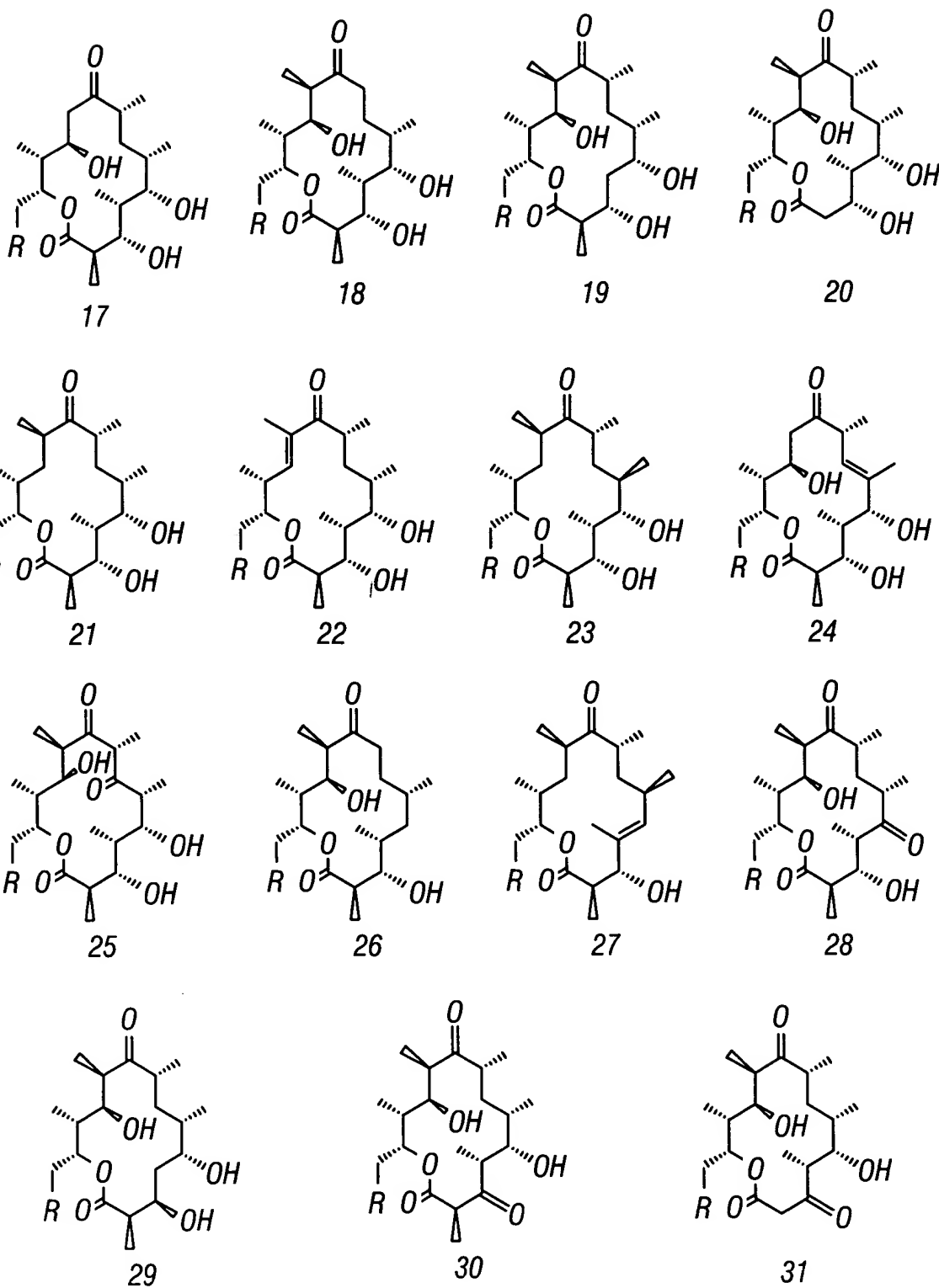
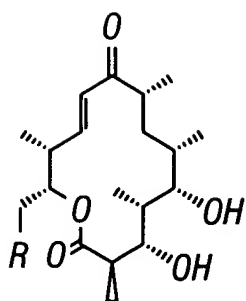


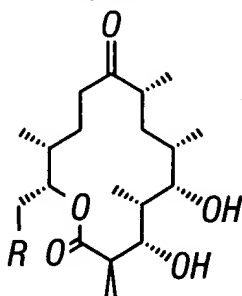
FIG. 6B



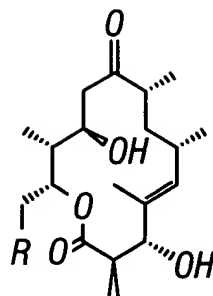
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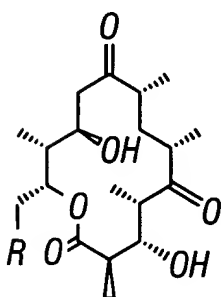
32



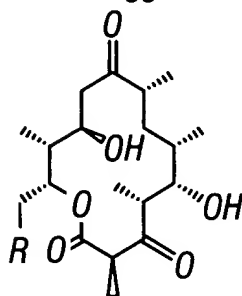
33



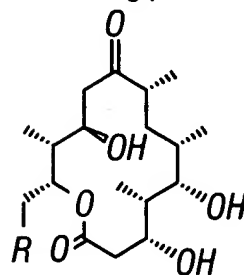
34



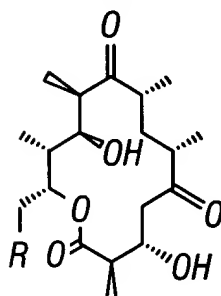
35



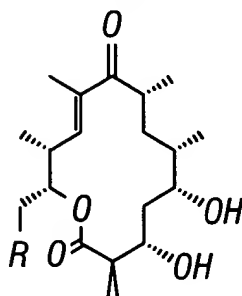
36



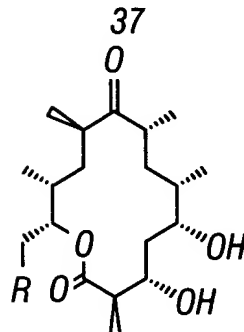
37



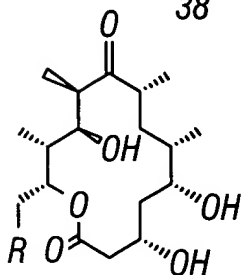
38



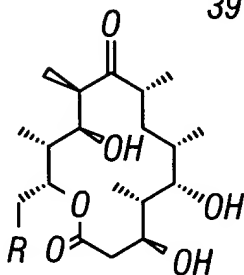
39



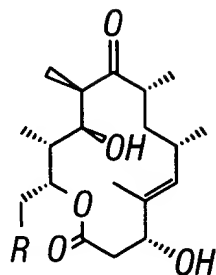
40



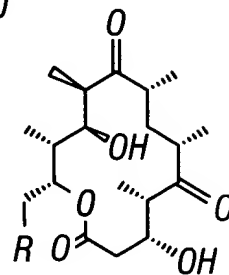
41



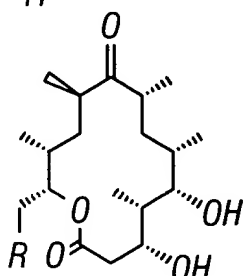
42



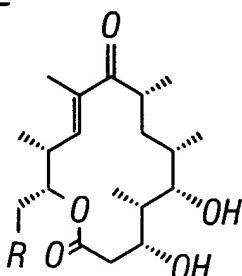
43



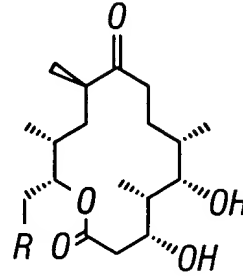
44



45



46



47

FIG. 6C

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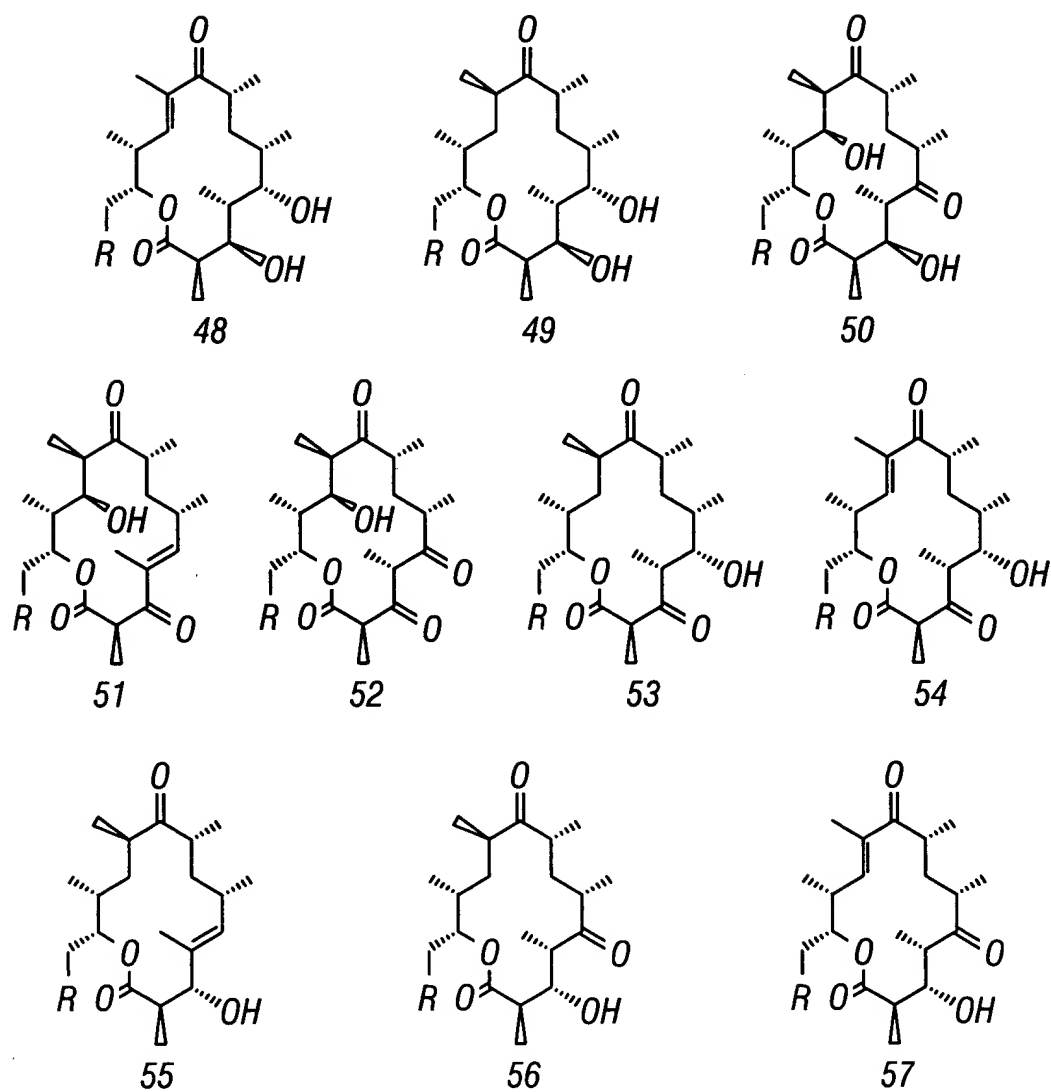


FIG. 6D

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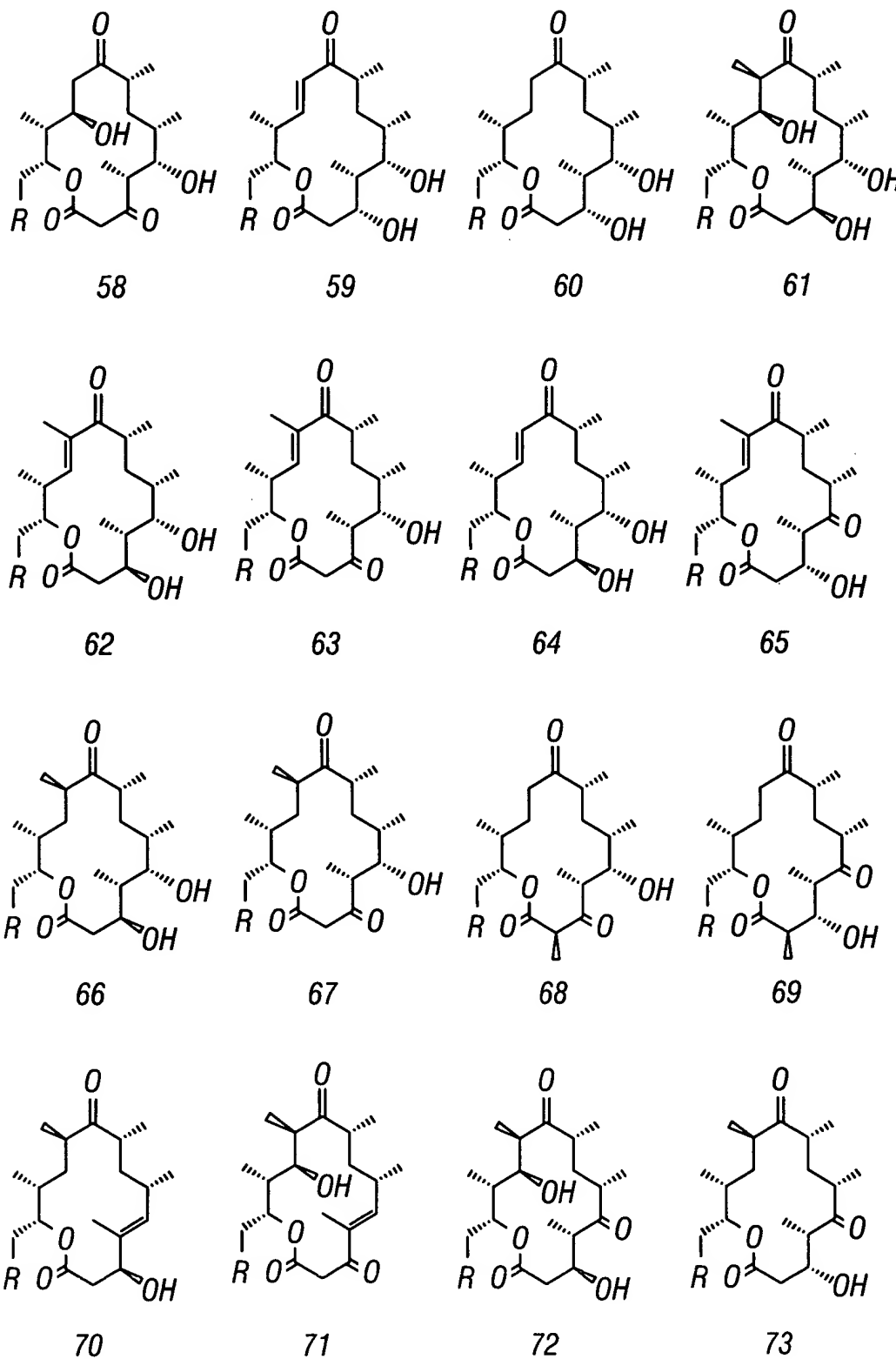


FIG. 6E

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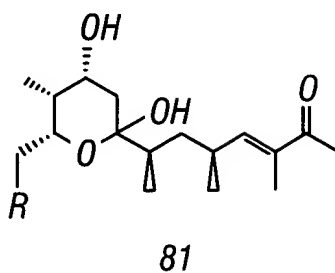
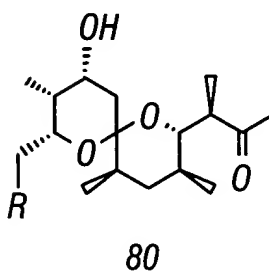
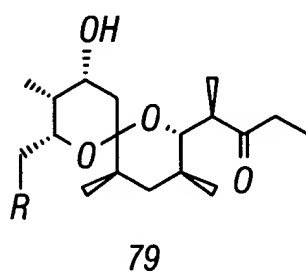
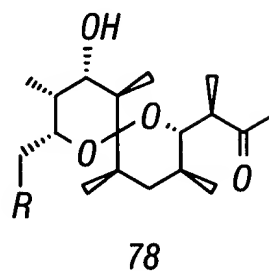
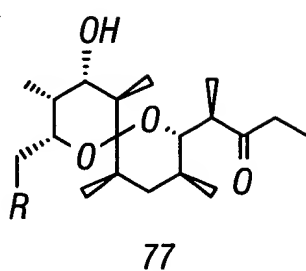
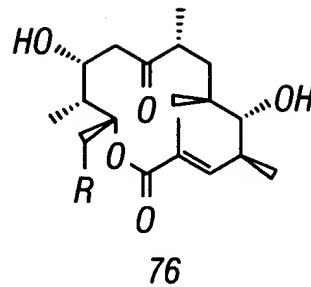
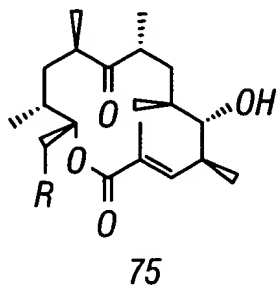
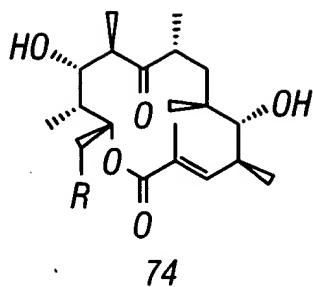


FIG. 6F

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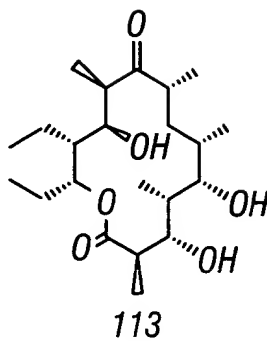
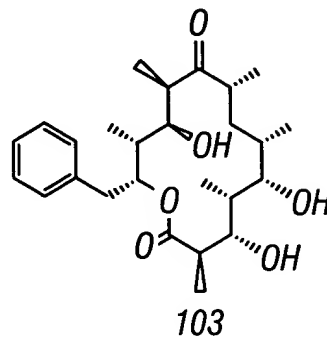
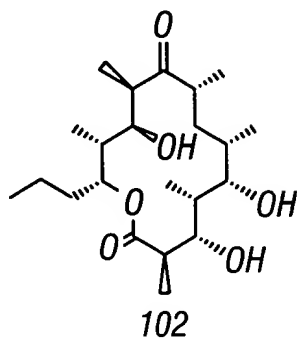
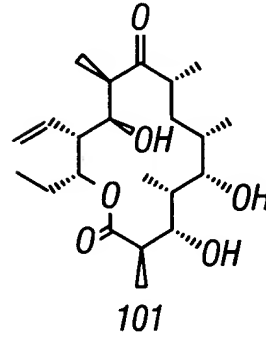
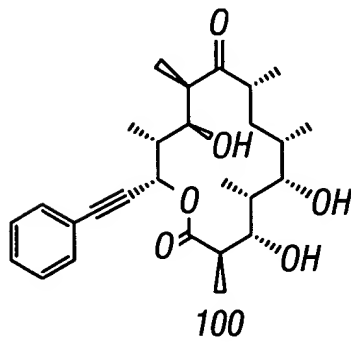
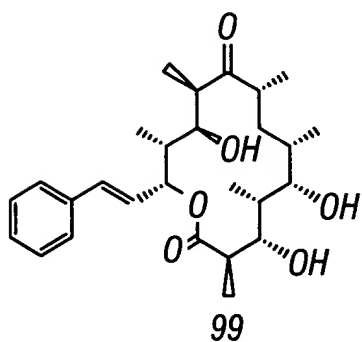
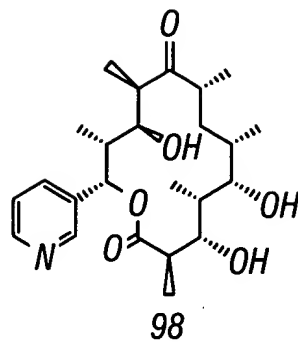
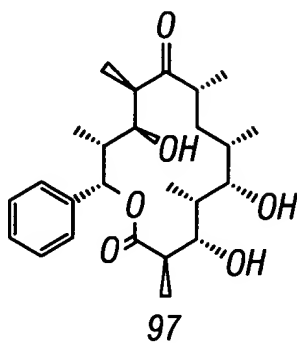
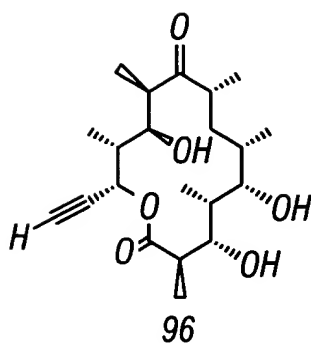
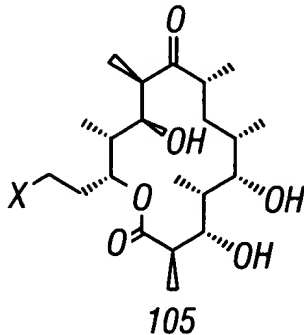
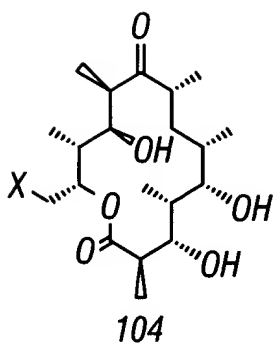


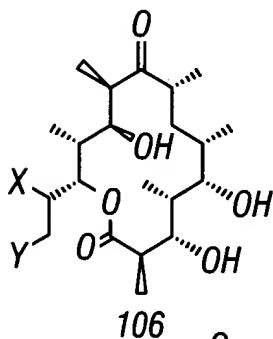
FIG. 6G

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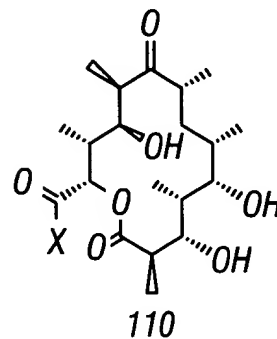
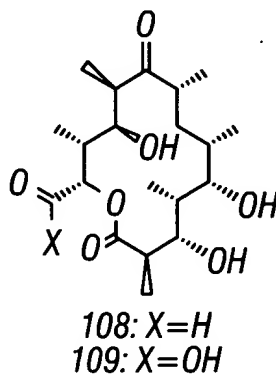
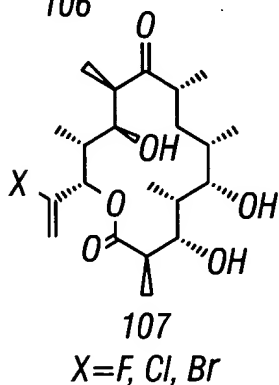
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$X = F, Cl, Br, N_3, OH, O\text{-alkyl}, S\text{-alkyl}, CN, O\text{-acyl}, O\text{-aryl}, NH_2, NH\text{-alkyl}, N(alkyl)_2$



$X = F; Y = H, Br, I, OH, O\text{-alkyl}, O\text{-aryl}, N_3, CN, S\text{-alkyl}, S\text{-aryl}$   
 $X = OH, Y = OH$   
 $X, Y = -O-, -NH-, -NR-$



$X = O\text{-alkyl}, O\text{-aryl}, NH_2, NH\text{-alkyl}, N\text{-}(alkyl)_2, NH\text{-aryl}$

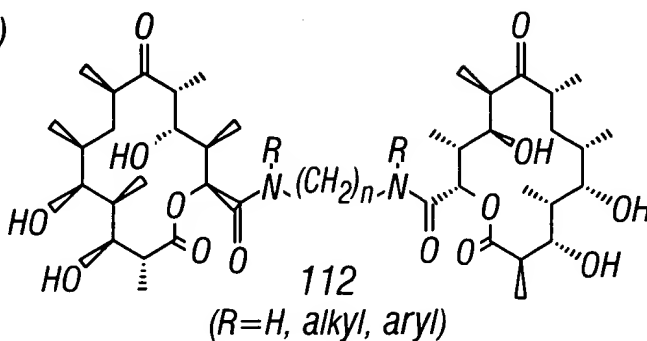
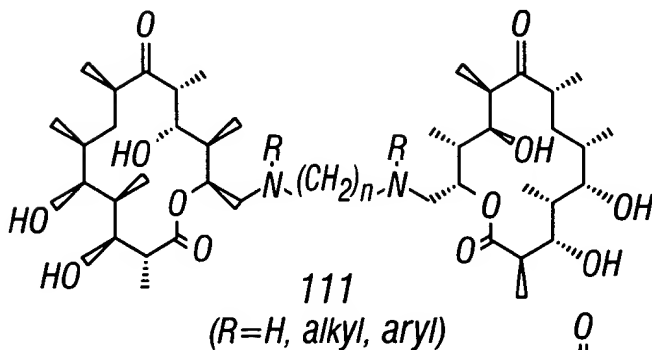
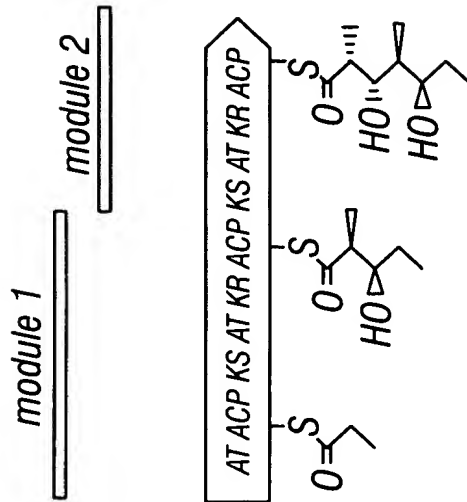


FIG. 6H

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CH999/pCK9

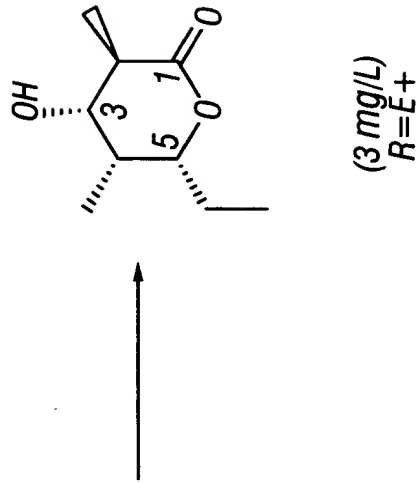
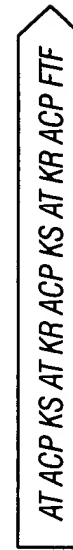


FIG. 7A



CH999/pCK12

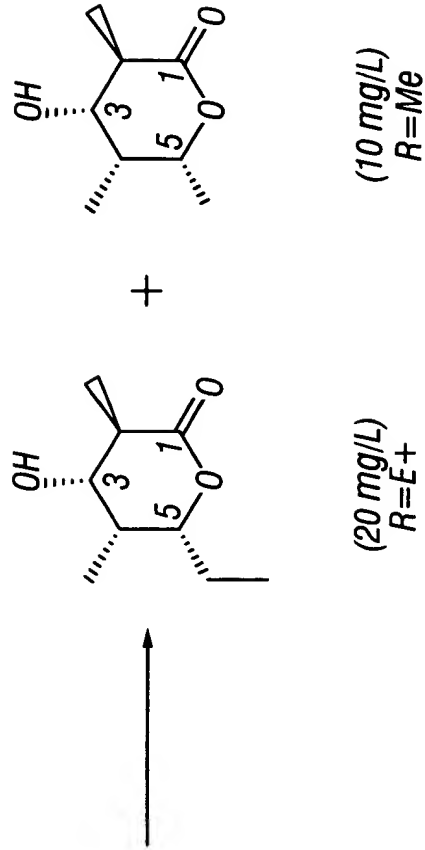


FIG. 7B

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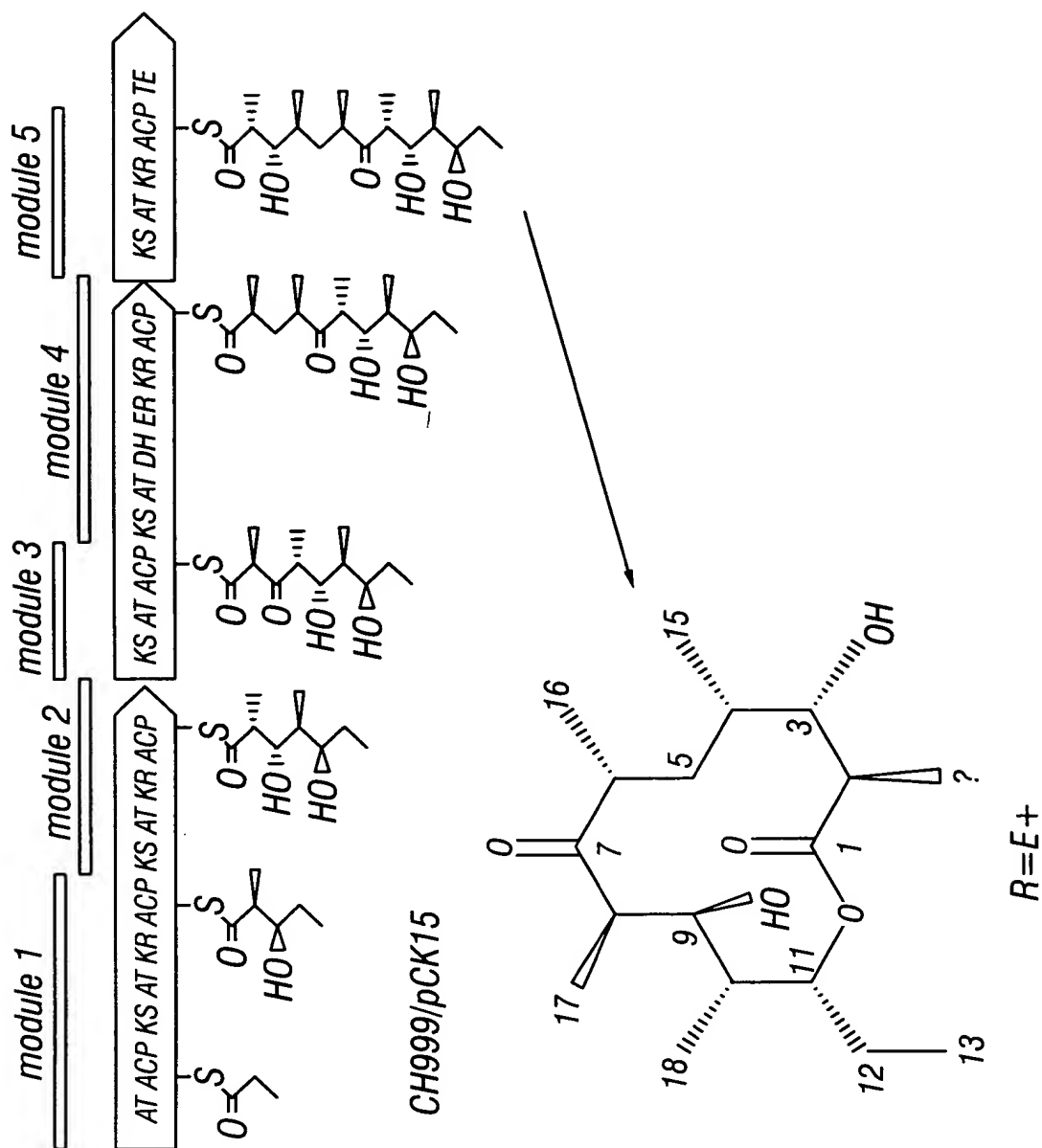


FIG. 7C



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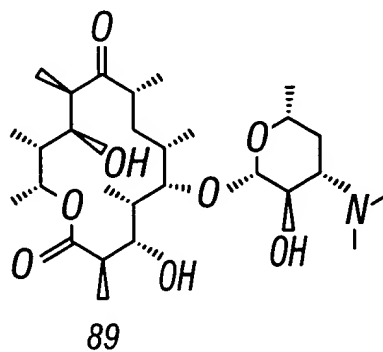
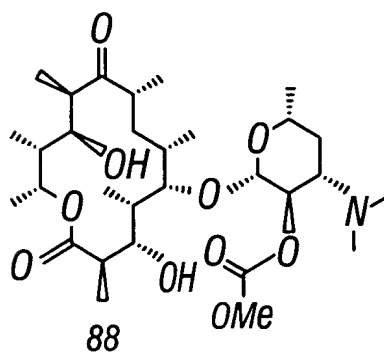
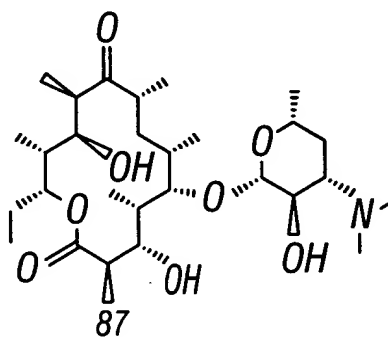
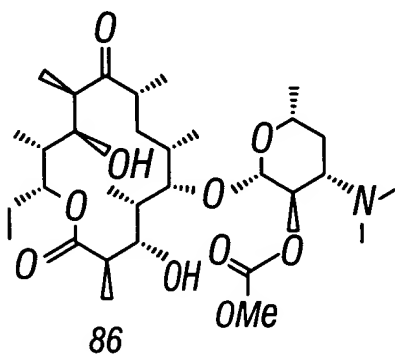
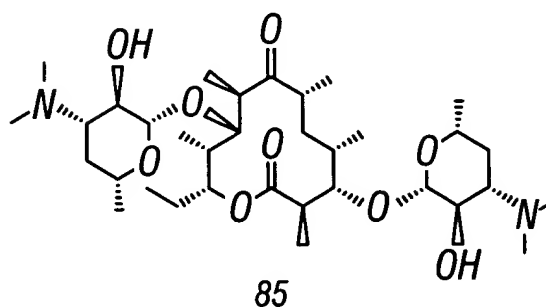
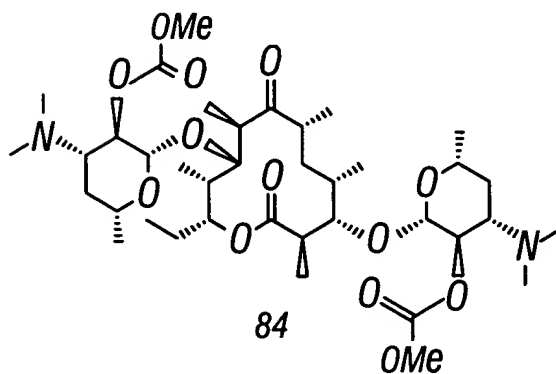
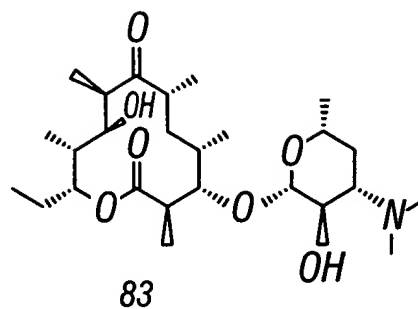
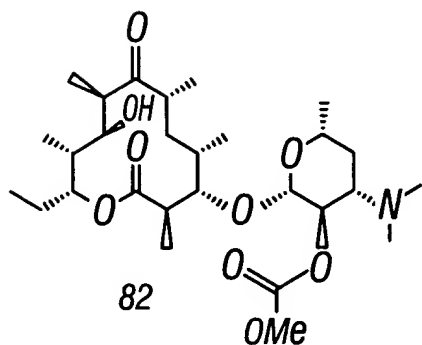


FIG. 8A

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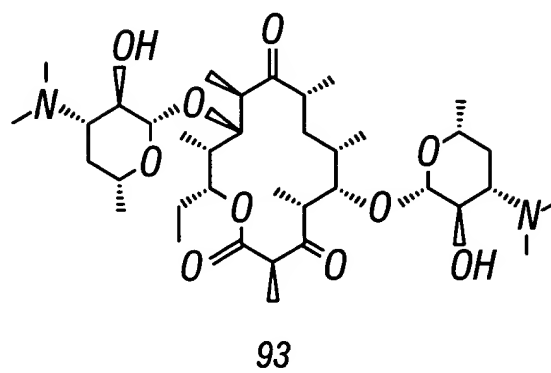
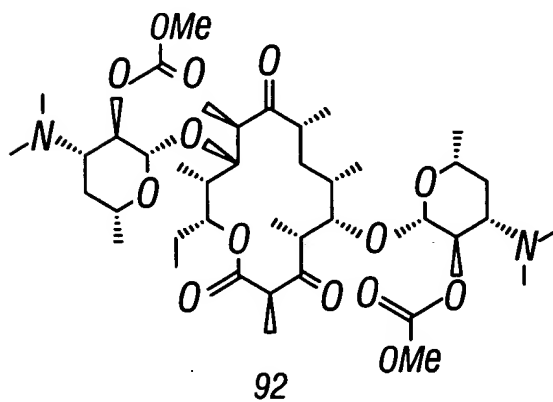
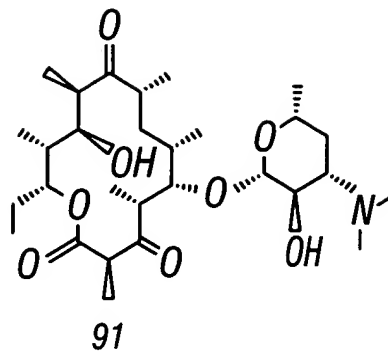
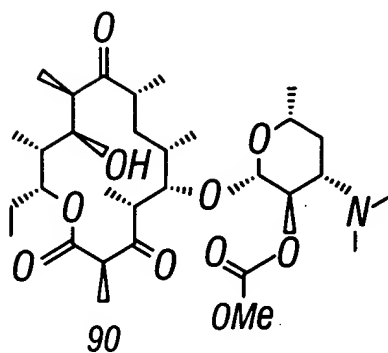


FIG. 8B

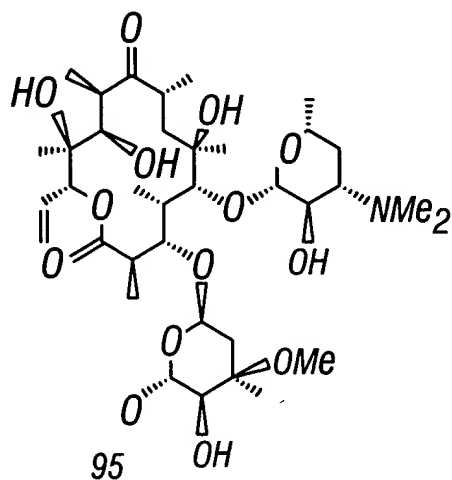
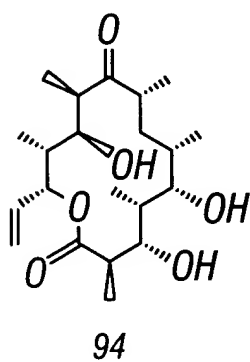
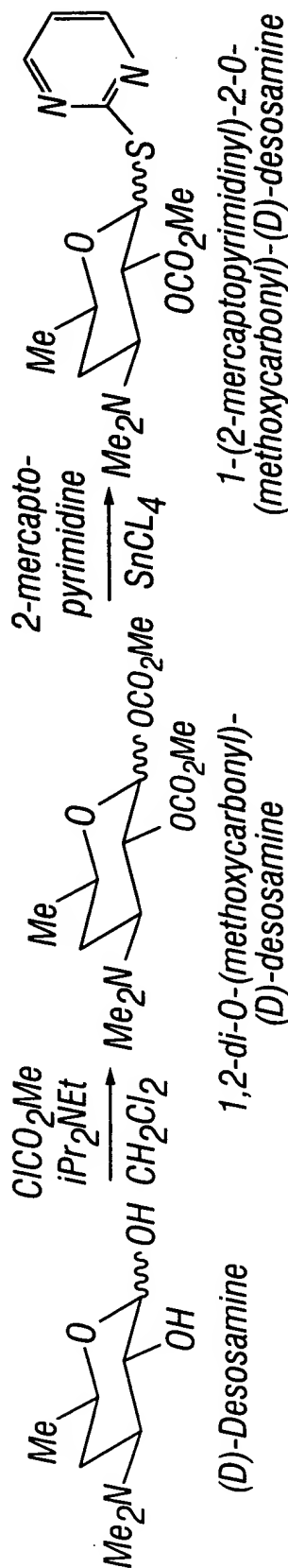


FIG. 9

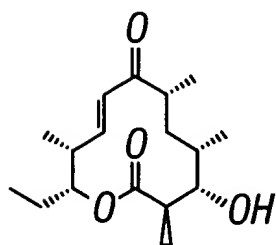
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**Preparation of 1-(2-mercaptopyrimidinyl)-2-O-(methoxycarbonyl)-(D)-desosamine**

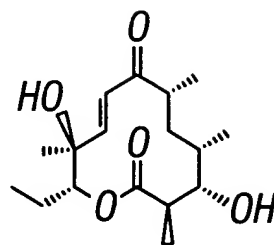


**FIG. 10**

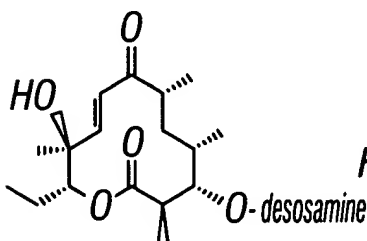
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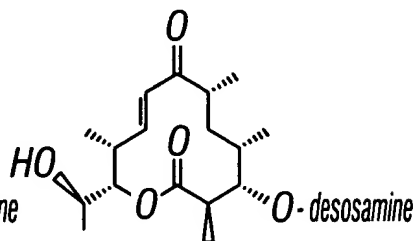
10-deoxymethynolide  
210



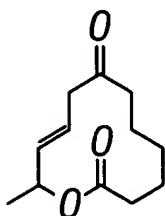
methynolide  
211



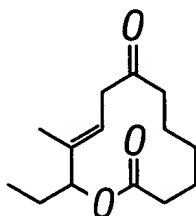
methymycin  
212



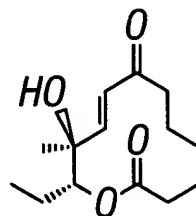
neomethymycin  
213



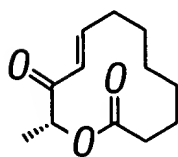
201



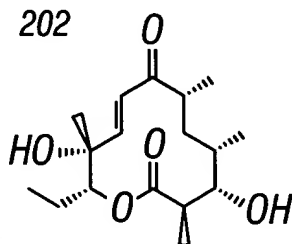
202



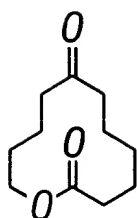
203



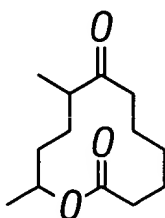
204



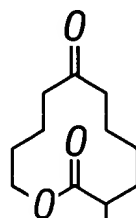
10-epi-methynolide  
205



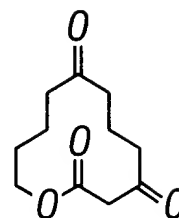
206



207



208



209

FIG. 11

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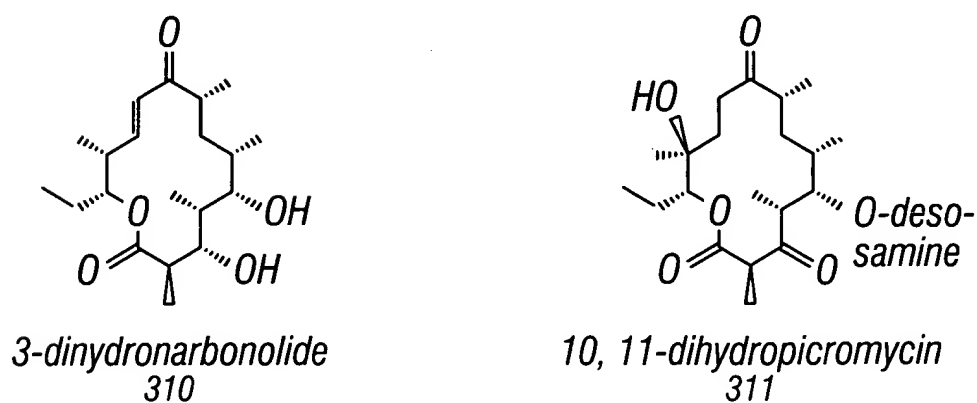
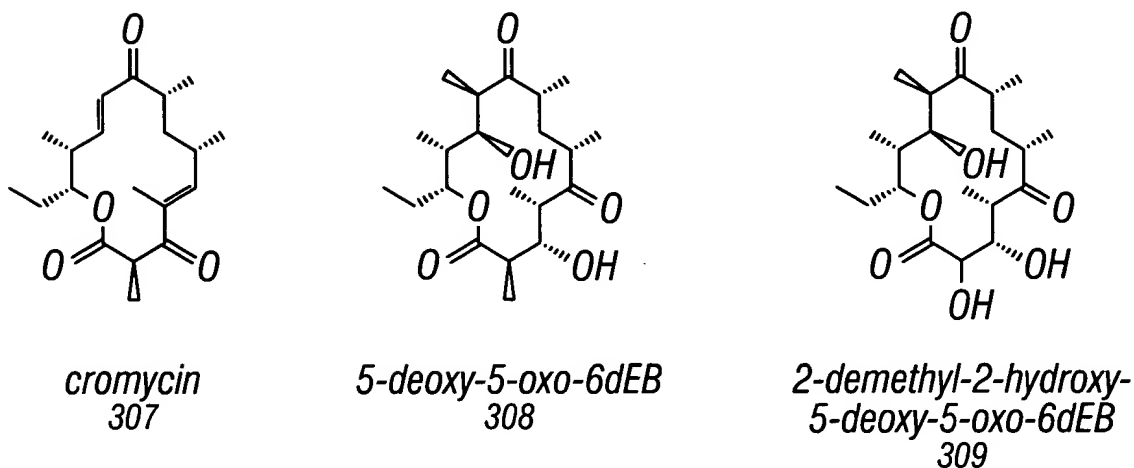
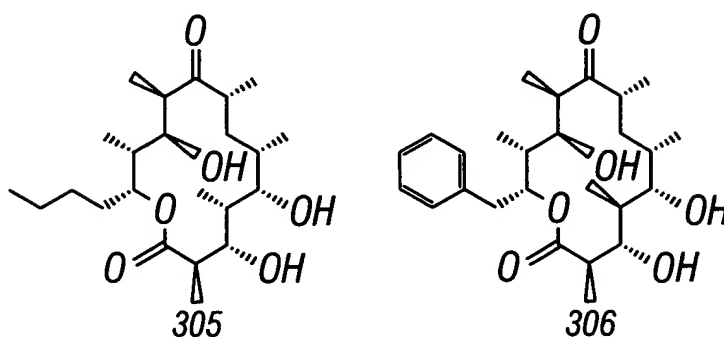
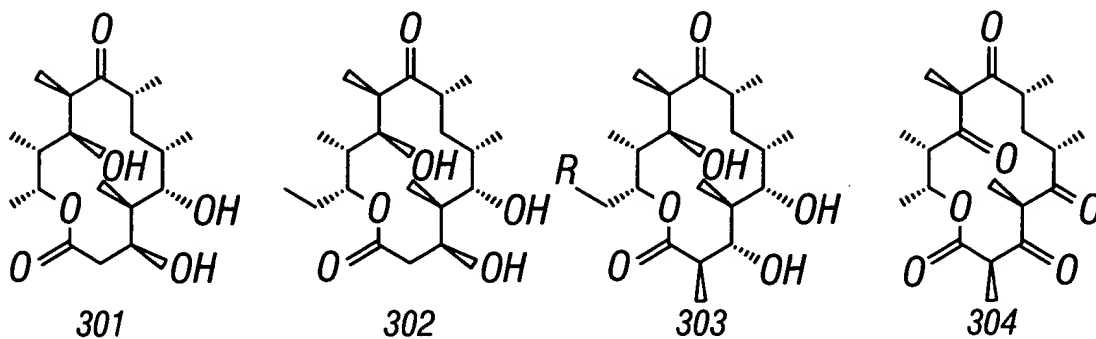


FIG. 12A

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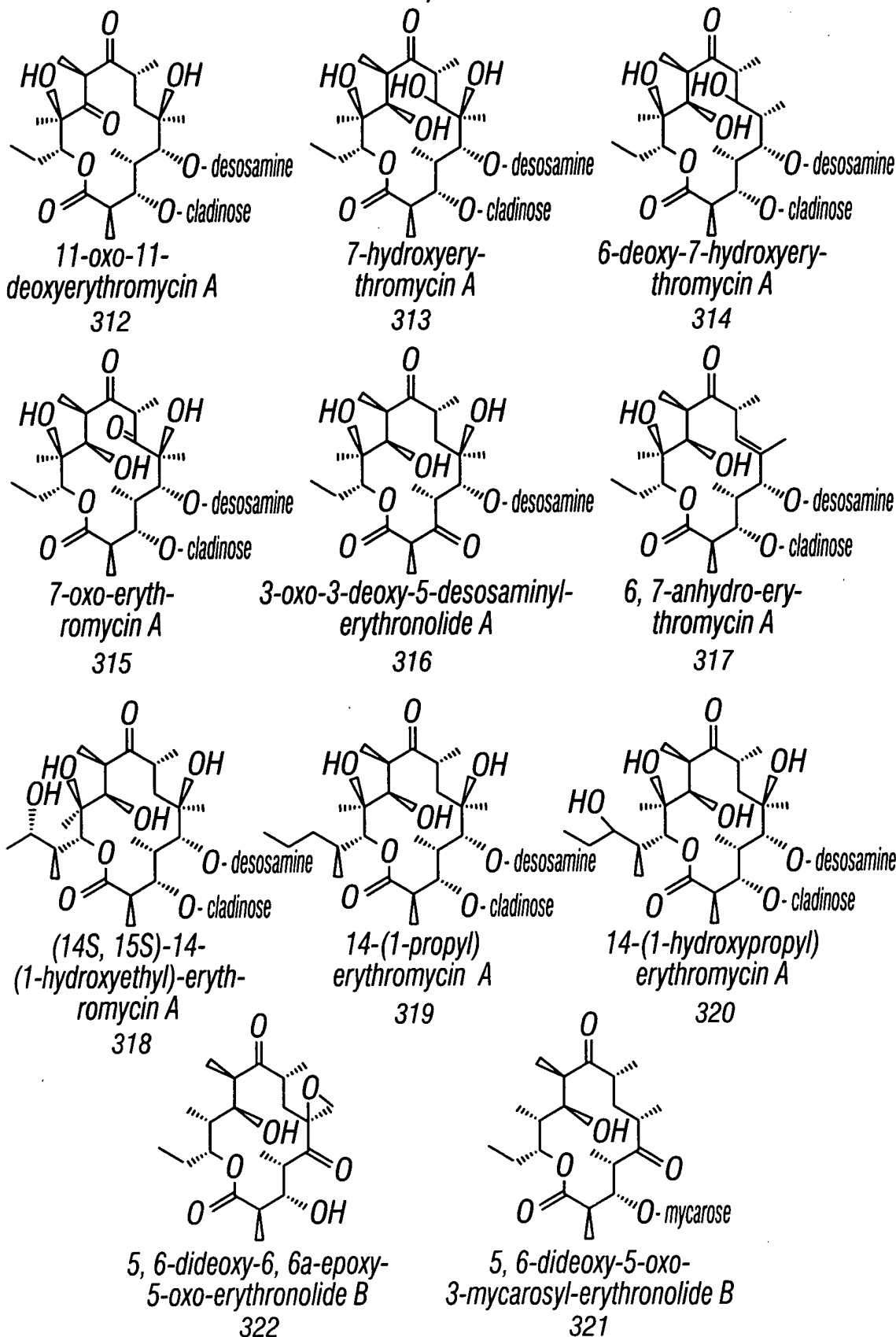


FIG. 12B